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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,700

09/05/2006

Takuya Tsurume

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31780 7590 12/16/2009
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EXAMINER

ZARNEKE, DAVID A

ART UNIT

PAPER NUMBER

2891

MAIL DATE

DELIVERY MODE

12/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,700	Applicant(s) TSURUME ET AL.	
	Examiner David A. Zarneke	Art Unit 2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-49 is/are pending in the application.
- 4a) Of the above claim(s) 29-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-28 and 36-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/12/09;8/4/08;9/5/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of Group IV and species A, corresponding to claims 22, 23, 25-28, 36, 37, 39-44, and 44-49 in the reply filed on 11/12/09 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 24, 38, and 45 are rejoined and included in the examined claim set. The examined claim set now contains claims 22-28, and 36-49.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 22-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo, US Patent Application Publication 2003/0170946.

Kondo teaches a method for manufacturing an article comprising:
selectively forming a release layer [11] over a substrate [10] (figure 1),
forming a plurality of thin film integrated circuits [12/13] over the release layer (figure 1);
forming a first opening portion [21] at a boundary between the plurality of thin film integrated circuits adjacent to each other among the plurality of thin film integrated circuits (figure 2);
pasting the plurality of thin film integrated circuits to a first substratum [21] having an adhesion surface;
after pasting the plurality of thin film integrated circuits to a first substratum, introducing gas or liquid including halogen fluoride to the first portions to remove the release layer (5, [0067] & figures 4-5);
separating the substrate from the plurality of thin film integrated circuits (figure 6);
and
transposing the plurality of thin film integrated circuits to a second substratum [71] having an adhesion surface with a higher adhesion strength than that of the adhesion surface of the first substratum (figures 7-9).

Kondo fails to teach selectively forming the release layer.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a selectively formed release layer in the invention of Kondo because a

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selectively formed release layer is conventionally known and used by one of ordinary skill in the art. A skilled artisan would use a selectively formed release layer to save money by using less release layer material and less gas or liquid including halogen fluoride composition. The use of conventional materials to perform their known functions is obvious (MPEP 2144.07).

Kondo, which fails to say how the gas or liquid reaches the first opening, fails to teach the first substratum having a second opening portion and introducing the gas or liquid into the second opening to reach the first opening, wherein the first opening portion is overlapped with the second opening portion.

It would have been obvious to one of ordinary skill in the art at the time of the invention to form a second opening in the first substratum because it is an obvious and easily performed step of delivering the gas or liquid to the first opening to thereby allow for removal of the release layer. The use of conventional materials to perform their known functions is obvious (MPEP 2144.07).

Regarding claims 36 and 43, these claims recite the same limitations as above and adds cutting the plurality of thin film integrated circuits at a boundary between the plurality of thin film integrated circuits adjacent to each other.

While Kondo fails to teach this, it would have been obvious to one of ordinary skill in the art at the time of the invention to use cut the plurality of thin film integrated circuits at a boundary between the plurality of thin film integrated circuits adjacent to each other in place of the technique used in the invention of Kondo (figures 8-9) because it is an equivalent method of removing thin film integrated circuits that is known

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and used by each and every skilled artisans. The substitution of one known equivalent technique for another may be obvious even if the prior art does not expressly suggest the substitution (Ex parte Novak 16 USPQ 2d 2041 (BPAI 1989); In re Mostovych 144 USPQ 38 (CCPA 1964); In re Leshin 125 USPQ 416 (CCPA 1960); Graver Tank & Manufacturing Co. V. Linde Air Products Co. 85 USPQ 328 (USSC 1950).

Claim 43 further adds filling periphery of the plurality of thin film integrated circuits with an organic resin.

While Kondo fails to teach this, it would have been obvious to one of ordinary skill in the art at the time of the invention to fill the periphery of the plurality of thin film integrated circuits with an organic resin in the invention of Kondo because each and every skilled artisan knows that an organic resin is conventionally used to protect the integrated circuits from contaminants and other environmental factors. The use of conventional materials to perform their known functions is obvious (MPEP 2144.07).

With respect to claims 23, 37, and 44, while Kondo fails to teach the first substratum comprises silicon resin or fluorocarbon resin, it would have been obvious to one of ordinary skill in the art at the time of the invention to use silicon resin or fluorocarbon resin for the first substratum in the invention of Kondo because silicon resin or fluorocarbon resin are conventionally known and used materials used as a substratum. The use of conventional materials to perform their known functions is obvious (MPEP 2144.07).

As to claims 24, 38, and 45, while Kondo fails to teach the first substratum is a roll having silicon resin or fluorocarbon resin thereon, it would have been obvious to one

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of ordinary skill in the art at the time of the invention to use a roll of the silicon resin or fluorocarbon resin of the above paragraph in the invention of Kondo because this would automate the process and allow for faster processing times. The court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art (MPEP 2144.04 III).

In re claims 25, 39, and 46, while Kondo fails to teach the second substratum is a flexible substrate or a protective film, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a flexible substrate or a protective film for the second substratum in the invention of Kondo because they are conventionally known and used materials used as a substratum. The use of conventional materials to perform their known functions is obvious (MPEP 2144.07).

Regarding claims 26, 40, and 47, while Kondo fails to teach an antenna is formed over the second substratum, it would have been obvious to one of ordinary skill in the art at the time of the invention to use an antenna in the invention of Kondo because an antenna is conventionally known and used in the art to form certain IC packages. The use of conventional materials to perform their known functions is obvious (MPEP 2144.07).

With respect to claims 27, 41, and 48, wherein the plurality of thin film integrated circuits comprise a semiconductor film with a thickness of 0.2 um or less, It would have been obvious to one ordinary skill in the art at the time of the invention to optimize the

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semiconductor film thickness through routine experimentation, especially in light of the industries desire to miniaturize semiconductor packages (MPEP 2144.05).

As to claims 28, 42, and 49, wherein the semiconductor film is crystallized by laser irradiation, it would have been obvious to one of ordinary skill in the art at the time of the invention to use crystallize the semiconductor film using laser irradiation in the invention of Kondo because laser irradiation to crystallize a semiconductor film is conventionally known and used in the art. The use of conventional materials to perform their known functions is obvious (MPEP 2144.07).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Zarneke whose telephone number is (571)-272-1937. The examiner can normally be reached on M-Th 7:30 AM-6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kiesha Bryant can be reached on (571)-272-1844. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David A. Zarneke/
Primary Examiner, Art Unit 2891
12/13/09